# Women doctors—a review

B R Bewley FRCP FFPHM

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Beulah Bewley worked in hospital posts in paediatrics and infectious diseases for 5 years and then in community public health services and occupational medicine for 10 years. Later she moved to St Thomas's on a 5 year MRC Research project on children's smoking. Her next post was as senior lecturer at Kings College Hospital, London School of Hygiene and Tropical Medicine, and St George's Hospital Medical School. A past President of the Medical Women's' Federation and of the Section of Epidemiology & Public Health, RSM (1993–1994), Dr Bewley has been an Elected Member of the General Medical Council for the past 15 years.

Address: 11 Garrads Road, London SW16 1JU, England, UK

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## SUMMARY

**There have been very marked changes in the number of women doctors who have come into the profession in this country in the past 40 years. They have faced problems because of society's preconceptions of their role as women. I previously reviewed their position in 1975[1] and 1986[2], and now take a look at areas where progress has been made, and also note whether there is still inequality and where women have still not achieved their full potential. I shall make some suggestions for improvement.**

## INTRODUCTION

There have been many papers and reports on women doctors in the past 20 years as well as some major initiatives[3–7]. The Oxford Regional part-time training scheme was set-up due to the drive and initiative of Professor Dame Rosemary Rue. The Government has produced 'Opportunity 2000', and the Department of Health has been encouraging change and has set up a women's unit. Nevertheless, some regions still have considerably fewer women consultants than others[8]. The Royal College of Surgeons has recently pioneered training schemes for women in surgery, in order to redress some of the imbalances within their own speciality[9].

## HISTORICAL BACKGROUND

Women have always been involved in the treatment of illness and have been responsible for the care and upbringing of children, as well as looking after the sick and the dying. They were practising physicians and surgeons in the middle ages[10–13]. The textbook *The Medieval Woman's Guide to Health* was written in the eleventh Century by Trotula, a distinguished woman Physician and Surgeon and was in use for several centuries[13]. Medicine was also practised by women in religious orders: history suggests that these were a combination of nuns, apothecaries, general practitioners and nurses. The later development of a more organized profession had major implications for women and eventually resulted in their exclusion in the UK, partly because of their lack of education in the basic sciences. Women could not attend universities nor be licensed to practice.

The first registered woman doctor in the UK entered Edinburgh Medical School in 1812 as a man, but this was not discovered until she died. James (Miranda Stewart) Barry joined the Army a year after qualification. She was an assistant surgeon at the Battle of Waterloo (1815), served in many countries of the Empire and also in the Crimean War. In 1858 she became Inspector General of Hospitals. Dr Barry was small, noted to be somewhat feminine in appearance and was well known for her temper and skilled marksmanship with a pistol.

Elizabeth Blackwell was officially the first woman on the General Medical Council (GMC) register (1859). She was born in Bristol but her family, who were non-conformists, were poor and they emigrated to the USA. She took her medical training in New York and, qualified in 1848. When the GMC register was set up in 1858 it was possible for her to register. Elizabeth Garrett, later Elizabeth Garrett

Anderson, was the first woman to qualify in medicine in the UK. She had been very influenced by Elizabeth Blackwell and was determined to be a doctor. In 1865 she obtained a diploma from the Society of Apothecaries in London. Her father was wealthy and supportive and threatened to sue the Society if she was not awarded the Diploma because she was a woman[14]. The universities were much slower to award degrees, but in 1876 Sophia Jex Blake received a medical degree from Edinburgh University.

Major changes came with increased education of women, with all the benefits that higher education can provide. The First World War 1914–1918 showed that excellent work could be carried out by a few determined women doctors[15]. Between the wars there were a limited number of qualified women doctors, who tended to concentrate on women's and children's health, and preventive medicine. In the Second World War (1939–1945) women doctors carried out major medical service tasks in the UK. The National Health Service (NHS) started in 1948 and since then there have been a number of manpower reports advocating that either more or less doctors were needed. In the 1960s many doctors were migrating abroad (at one stage 1000 a year). There was also an influx of 1500 doctors a year from overseas. The late 1960s saw an expansion of medical schools and teaching hospitals. The quota system was abolished, which gave the opportunity for more women to become medical students. In addition, there was a substantial increase of medical school places following the Todd interim report in 1965. The number of women students again increased following the *1975 Sex Discrimination Act*, though probably not as a consequence of this legislation. The proportion of women applicants rose markedly. In 1947 all medical schools had been obliged to accept women students to qualify for a Government grant. By 1955 all had complied, though the numbers of women students remained low. It is only recently that 50% of medical students intake have been women.

Social changes influence patterns of work. While in 1911, 80% of women doctors were unmarried (census data), today it is estimated that 76% of female and 87% of male doctors are married, or living with partners. Eighty-five per cent of women doctors have children and have the major responsibility for their care and upbringing. Male doctors also have children, but having offspring does not have the same effect on their careers. Women are traditionally expected to accept other major tasks and commitments. As the population gets older, women's responsibilities increase and elderly parents need care and attention. Consequently the period with less responsibilities is now shorter as more and more women opt to have their children later. Doctors' careers have also become more demanding and more complex, particularly in the training grades.

*Table 1* **Women doctors (General Medical Council Register). *Note* in 199**

| *Year* | *Numbers* |
|---|---|
| 1871 | 2 |
| 1881 | 25 |
| 1891 | 100 |
| 1901 | 200 |
| 1911 | 600 |
| 1921 | 1 500 |
| 1931 | 3 000 |
| 1951 | 7 520 |
| 1971 | 12 596 |
| 1991 | 44 000 |
| 1994 March | 45 549* |
| Overseas | 7 561† |
| *1992* | *52% Medical school* |

*Total on Overseas List 37 116
†Total on Principal List 150 415

## PRESENT SITUATION

I have reviewed data from *Health Trends*[16]/the BMA[17]/the *GMC Annual Reports*[18] and 1994 *HMSO Social Trends*[19]. In 1871 there were two women doctors on the GMC Register. By 1891 there were 100. The number rose from 7500 in 1951 to 12,500 in 1971, a 67% increase. From 1971 to 1991 the numbers have more than trebled. The latest figures from the GMC (March 1994) show that there are now over 50 000 women on the principal GMC register (Table 1). Thirty per cent of all doctors on the GMC principal register are women, this includes those who are not working or retired. Approximately half of all doctors work in the hospital service, one-third in general practice and the rest in community services and other related specialties. Twenty per cent on the overseas qualified list are women.

There has been a marked increase in female hospital medical staff of all grades (Table 2). The overall increase in

*Table 2* **Per cent of change in women doctors/hospital medical staff (from *Health Trends* 1993/1994; 25: 118–26)**

| *Hospital* | *1973 (%)* | *1979 (%)* | *1992 (%)* |
|---|---|---|---|
| Consultant | 8 | 11 | 16 |
| Senior Registrar | 15 | 18 | 30 |
| Registrar | 17 | 19 | 25 |
| Senior House Officer | 20 | 25 | 38 |
| Total | | | |
| Women | 15 (i.e. 4328) | 19 (i.e. 6680) | 26 (i.e. 10 303) |
| Men | 85 (i.e. 23 776) | 81 (i.e. 27 770) | 74 (i.e. 929 884) |

*Table 3* **Percentage of women consultants by specialty**

| *All specialties* | *1977 (%)* | *1992 (%)* |
|---|---|---|
| Women consultants | 10 | 16 |
| General medicine | 3 | 8 |
| General surgery | 1 | 2 |
| Accident & Emergency | 9 | 10 |
| Obstetrics & Gynaecology | 12 | 14 |
| Mental illness | 11 | 24 |
| Anaesthetics | 17 | 21 |
| Pathology | 17 | 24 |
| Paediatrics | 14 | 28 |
| Radiology | 11 | 22 |
| Haematology | 14 | 26 |
| Child & adolescent psychiatry | 33 | 40 |

*Table 4* **Percentage of women by surgical specialties (1992: England & Wales)**

| | *Consultants (%)* | *Senior Registrars (%)* | *Registrars (%)* |
|---|---|---|---|
| Cardiothoracic | 3.5 | 2.4 | 4.8 |
| General surgery | 1.5 | 6.5 | 7.1 |
| Neurosurgery | 1.0 | 7.4 | 7.4 |
| Trauma/orthopaedic | 1.6 | 1.3 | 3.3 |
| Otolaryngology | 4.2 | 9.1 | 6.5 |
| Ophthalmology | 11 | 20 | 21 |
| Paediatric | 18 | 35 | 24 |
| Plastic surgery | 4.5 | 8.8 | 16 |
| Urology | 2.4 | 5.4 | 5.3 |
| Total | 5.3 | 9.0 | 11 |

women consultants has been unevenly distributed (Table 3). Women account for 5% consultants, 9% senior registrars and 11% registrars in all the surgical specialties. Some specialties have very few women consultants, particularly trauma, orthopaedics and urology. The group 'Women in Surgical Training' are attempting to change this pattern with help from the Colleges of Surgeons and the Department of Health women's unit (Table 4). These changes will continue as more women medical students qualify.

From 1975 to 1990 part-time posts existed only at the Registrar and Senior Registrar (SR) level. Approximately 25% of SR posts in 1980 were part-time, falling to 20% in 1990, similarly Registrar posts have fallen from 15% to 10% over the same period. Part-time posts show great variation, with Oxford having the most and North East Thames, Wales and the Special Health Authorities the least. Part-time consultant posts, which are funded centrally, also show marked variation with East Anglia, Yorkshire and South Western Regions having less such posts available.

The number of women doctors in general practice has increased from 26000 in 1981 to 30000 in 1992. The percentage of women GPs rose from 18% in 1981 to 28% in 1992. Twenty-six per cent of unrestricted principals and 41% of restricted principals in 1992 were women. Fifty-nine per cent of assistants and 48% of trainees were women (Table 5).

Thirty-nine per cent of staff in public health medicine are women, including 27% of Directors of Public Health and 33% of other public health consultants. Fifty-two per cent of SR/Registrars in training are women. Three and a half thousand medical staff work in these grades at senior clinical medical officer and clinical medical officer level (75% being women). Nearly half of these women doctors were born outside the European Community (Table 6).

*Table 5* **General medical practitioners in posts in England and Wales 1981–1992**

| *Female (%)* | *1981* | *1987* | *1992* |
|---|---|---|---|
| Unrestricted principals | 16 | 21 | 26 |
| Restricted principals | 36 | 37 | 41 |
| Assistants | 55 | 57 | 59 |
| Trainees | 34 | 42 | 48 |
| Female practitioners | 18 | 22 | 28 |
| Total numbers (men & women) | 25906 | 28791 | 30020 |

*Table 6* **Public health medicine staff and Community health service staff**

| | *Number* | *Female (%)* | *Born outside EC (%)* |
|---|---|---|---|
| Public Health | | | |
| Director | 177 | 27 | 11 |
| Consultant | 457 | 33 | 14 |
| Registrar and Senior Registrar | 374 | 52 | 14 |
| Other | 43 | 53 | 21 |
| Total | 1051 | 39 | 14 |
| Community Health | | | |
| Senior Clinical/Medical Officer | 1357 | 74 | 31 |
| Clinical Medical Officer | 2036 | 74 | 27 |
| Total | 3393 | 75 | 31 |

EC=European Community

*Table 7* **Numbers on college councils and other policy making bodies 1994**

| | Men | Women | Total | Female |
|---|---|---|---|---|
| Faculty of Public Health Medicine | 28 | 12 | 40 | 30% |
| Royal College of Obstetricians and Gynaecology | 21 | 7 | 28 | 25% |
| Royal College of Pathologists | 20 | 6 | 26 | 23% |
| Royal College of Radiologists | 15 | 3 | 18 | 17% |
| Royal College of Anaesthetists | 17 | 3 | 20 | 15% |
| Royal College of General Practitioners | 63 | 9 | 72 | 13% |
| Royal College of Psychiatrists | 71 | 7 | 78 | 9% |
| Royal College of Physicians | 28 | 2 | 30 | 7% |
| Royal College of Surgeons | 37 | 2 | 39 | 5% |
| Royal College of Opthamologists | 38 | 2 | 40 | 5% |
| GMC (elected/appointed and nominated)* | 87 | 15 | 102 | 15% |
| BMA: BMA Council | 59 | 13 | 72 | 18% |
| GMSC | 72 | 10 | 82 | 12% |
| CCHMS CCSC | 74 | 12 | 86 | 14% |
| Total | 630 | 103 | 733 | 14% |

*GMC (General Medical Council) includes lay members; BMA=British Medical Association; GMSC=General Medical Services Committee; CCHMS=Central Committee for Hospital Medical Services; CCSC=Central Consultants Specialist Committee

A measure of achievement is the system of merit awards. There are marked differences between the sexes. Fourteen per cent of women receive a C award compared to 22% of men. The differences are greater with B and A awards: 4% of women and 10% of men have Bs, while only 2% women and 6% men have A or A plus awards. There are also relatively few women on college, faculty, GMC or British Medical Associations (BMA) Councils. The situation has improved since 1975 when it was 3% of women for all groups combined. Today 14% of such council members are women (Table 7). Similarly there are relatively few women Professors or undergraduate or postgraduate Deans.

Women doctors have special problems. When the Red Queen told Alice that she had to run twice as hard to remain in the same place, she was probably thinking of the problems faced by women[20]. They are expected to take, and they accept, a greater range of responsibilities outside their profession than do men. The most recent *General Household Survey* (GHS) showed that women had less leisure time than men. Fully employed men had 14 h a week more free time than women. Whether women worked full or part-time they did more cooking, shopping and housework and were more involved in child care. Men working full time spent 26 h on these duties, compared with 46 h for women working full time and 58 h for women working part-time. Men often had more free time per day than women, with 5 h daily for men, 3 h for fully employed women and 5 h for women working part time. All these groups slept for the same length of time. There is insufficient information to know what happens when the woman works full time and her partner is unemployed.

There is evidence that the extra expectations of women and their added responsibilites can be stressful. The GHS data showed that professional women are the only group who smoke more than their male counterparts. It is not possible to compare excess alcohol consumption by sex as the suggested limits are artificial and different. However, professional women, women employers and women managers consume more alcohol above the recommended limits than other groups of women.

## DISCUSSION

Women doctors are not immune from changes taking place in society. These include marital breakdown, single parent families, frequent job changes and unemployment. Relocation of posts at frequent interval plus the current uncertainties in the NHS are stresses for both sexes. The dilemma of organizing personal life with its relationships, marriage, children, housework and professional obligations is more of a problem for women. Lack of government support for child care is unhelpful for all mothers. It has been suggested that the greatest liberators for women have been the vacuum cleaner, washing machines, tumble dryers and irons. They have certainly simplified life but many of the early women doctors had servants who carried out most of their domestic chores. Advanced technology with home computers, mobile phones and faxes may enable some academics to work more at home. Nevertheless, women doctors' commitments will remain heavier than those of men.

It has been assumed that some specialties are much more suitable for part-time work. The Cinderella specialties, which are less popular and more short staffed, appear to be more willing to provide flexible options for those with dual responsibilities. Bynoe, who is an associate post-graduate Dean in Yorkshire, reported in a recent paper in *British Journal of Hospital Medicine* on a study[21] she carried out into career decision making and its consequences for women doctors. She showed that status did not influence women doctors' career decisions. Gender-related stressors such as a lack of role models, prejudice from patients and sexual harassment were more important.

National Studies by Parkhouse on four cohorts between 1974, and 1983, have reported on career paths[31]. In the early years following qualification women were less certain about their careers than men. The shortening registrar time may have important future implications for women, if the Calman report is implemented.

Lack of self confidence has been suggested as a barrier to women achieving their full potential. In studies of schools, there have been reports from the USA that girls start to do less well from 11 to 16. The 13-year-old girls in the USA reported that the three most important things in life were how pretty they were, how shapely their bodies were and how popular they were with boys. These girls had little or no control over these factors, so it is not surprising that they lost confidence in themselves. Lack of confidence was exacerbated by the boys in the classroom and their teachers. Another study from Harvard found that three of four answers in class were from boys, who spoke twice as long as girls. The girls found it more difficult to get equal time from their teachers, particularly in mathematics and science, when they attended mixed schools[23,24]. A study of self image in Kent primary school children found that girls aged 11 to 12 viewed themselves less well than boys of the same age and school class. Teachers tended to rank the boys as very good or bad, while the girls were placed in the middle range—neither good nor bad[25].

Doctors often marry other doctors. In a USA study 50% of women doctors were married to other doctors and over half of these had children. Isobel Allen's study found 87% men and 76% of women doctors were married, and 50% were married to other doctors. This is not surprising, as they meet frequently at work. Male doctors also marry nurses, who may then give up their career or pursue it part time more easily. Nurses have been traditionally less demanding in their career expectations. Recently, there have been more male nurses and a huge influx of administrators into the NHS, so this pattern may change. With more male nurses married to women doctors some degree of role reversal may take place.

Psychiatric morbidity is difficult to measure. There is evidence from a Canadian study that levels of anxiety and depression are five times higher for female than male doctors[26,27]. In the UK, women doctors have higher rates of suicide than their male colleagues and they are highest for those under 30 years of age. No sex differences in stress levels were found in medical students but during the pre-registration year differences emerged, when almost half the female junior house officers reported being clinically depressed[28]. In a recent study more female than male general practitioners (GPs) reported feeling anxious and depressed[29]. Being married to another doctor appeared to have a protective effect. Married women doctors fared better than single women doctor colleagues. They reported less stress and depression. Marriage appeared to reduce stress, possibly by providing social and emotional support. Women doctors in Yorkshire married to other doctors had half the level of emotional distress found in non-dual medical marriages[21]. Despite divorce and unsatisfactory marriages, the benefits of marriage to another doctor appear to outweigh the disadvantages.

Few women doctors are referred to the GMC, because of problems of conduct and behaviour. A recent study in the Northern Region by Liam Donaldson suggests that women cause less problems in terms of personality and psychopathic behaviour[30]. There was no information available on doctors who permanently or temporarily opt out of medicine, or the reasons for this.

## THE FUTURE

A recent letter in the *British Medical Journal* by Professor G Chamberlain stated[31]:

> To address the waste of women power perhaps a less rigid approach to consultant hours is needed, with more part time consultant posts being available than at present. Although flexible training, job sharing and part time posts are found at registrar level in obstetrics and gynaecology, it seems to be assumed that when a woman reaches consultant level all her reasons for wanting a part time job have disappeared and she will be able to work full time. The solution lies in many more part time (six session) posts being funded centrally. In addition, job sharing could be encouraged between two consultants, perhaps one having been appointed recently and the other being in the latter years of his or her career. In our training grades 32% of senior registrars and 40% registrars are women: 52% of female senior registrars are in part time employment and will be considered for Consultant appointments in the next few years. We cannot afford to waste this intellectual potential.

The problems facing women doctors with commitments vary at different stages of their careers. There are few problems at undergraduate level where equality of opportunity has been achieved. Currently, 2000 women medical students qualify each year, and this increase will inevitably effect the pattern of the delivery of medical care in the future. Post-graduate training is currently undergoing change and efforts are being made to make the system more

flexible. As well as the need to be in line with the rest of Europe, the Calman report recommends cutting the length of post-graduate training time, by merging senior registrar and registrar grades[32]. A shorter post-graduate period should encourage more women to stay in hospital medicine. Previously, they have been keener to go into GP, which has a shorter training programme. In 1991 54% of GP principals under 30 were women. If the most recent cohorts of women doctors follow the same pattern, this will ultimately lead to the majority of GPs being female[33].

Colleges and faculties are becoming increasingly more involved in continuing professional development. This should mean that no doctor will fail to receive further continuing medical education. Some doctors will need to acquire special techniques and identified skills to use new methods in their own field, but it is important that women doctors, despite their extra commitments should continue their education and training. Most doctors have some idea which career path they will select when they are in early professional training at Senior House Officer level whether this will be in hospital medicine, GP or in some other field. It is difficult to change if the wrong choice is made initially. Isobel Allen's studies[6] have shown that many young doctors are now despondent and some wish they had not gone into medicine. Uncertainty about the future, long unsocial hours and lack of support and advice compound their problems. The lack of suitable role models in some specialties may put younger women doctors off certain careers.

As many women doctors have heavy domestic commitments they require support in organizing their working lives. If they have been working part time or have had time off they will need to improve their clinical skills and time management when they return to fuller responsibilities. The Regional Post-graduate Dean will need to encourage regular refresher and updating courses. A sensible mentor, whether male or female, can provide useful career guidance and helpful support[34]. To enable more people to work and thus reduce morbidity from unemployment (with all the debility that this entails), there have been suggestions of a shorter working week for all as a possible solution. Job sharing and flexible part-time work might benefit more people and the medical profession should examine this seriously[35,36]. The Royal College of Obstetricians and Gynaecologists is considering some of these options which, if carried out should be monitored.

Changes in the NHS are taking place, with a greater emphasis on control of costs by management. Some of this is long overdue. The introduction of Trust status hospitals may lead to long-term changes in hospital staffing and contracts. It is too early to confidently predict how this will change the pattern of medical care. Women doctors may find themselves pushed towards staff grade posts or moved into supra specialist posts, in effect technicians in a very narrow field. Women are still very under-represented on Medical Councils and committees of Colleges, Faculties, the BMS and Senior Management. Some women may not wish to be active on committees nor seek office, because they are too busy and may not want to be away from clinical commitments or home activities. They should be encouraged to be more active in medical planning and politics. They must make sure, on appointment committees, that the best person is appointed and that women candidates are not overlooked (but not by reverse discrimination and appointing a token woman). Women are likely to lose out if they do not assert themselves. If future consultant contracts are given for a limited time, consultants may change posts more often. This could pose problems for women doctors, who are likely to remain less geographically mobile than their male colleagues. Women have tended to drift into the caring aspects of medicine (general practice, maternal and child care, the elderly and mental illness). More should be encouraged into academic medicine and surgery where there are too few today.

## CONCLUSION

Cultural anthropologists tell us that in their discipline it is only possible to measure change over three generations (a period of about 100 years). In the last 150 years the relationships of the sexes has slowly changed in this country. Women are now educated and more fairly treated. In the nineteenth century, Elizabeth Blackwell wrote 'I had no medical companionship'. In 1977, Walsh described the situation of the earliest twentieth-century female consultant as 'on the outside sitting alone'. Perhaps in the twenty-first century we shall see women doctors working equally with men in the profession. Women doctors have had a difficult task in establishing equality with their male colleagues. They have now achieved success in many areas. It is important they should not relax until there are no differences. Women doctors today are in general better educated than their mothers and indeed sometimes their brothers if we go by examination results, but, women doctors should not all have to become workaholics. Major changes in attitudes and practice will be necessary for women to achieve true parity in all aspects of medicine. By the middle of the next century I expect women doctors to have reached the 'peak of the pyramid' and to be evenly spread across the profession rather than predominantly in the lower, poorer and duller posts.

## MORAL

Flexibility is all. However, as Sir Thomas Brown pointed out:

> Flat and flexible truths are beat out by every hammer, but Vulcan and his whole forge sweat to work out Achilles in his armour.

I fear he may have meant that men organize matters to suit themselves; so women will have to continue to try harder[36].

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